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Cabral et al.(10) **Pub. No.: US 2022/0028157 A1**(43) **Pub. Date: Jan. 27, 2022**(54) **3D CONVERSATIONS IN AN ARTIFICIAL REALITY ENVIRONMENT**(71) Applicant: **Facebook Technologies, LLC**, Menlo Park, CA (US)(72) Inventors: **Brian Keith Cabral**, San Jose, CA (US); **Albert Parra Pozo**, Santa Clara, CA (US)(21) Appl. No.: **16/935,093**(22) Filed: **Jul. 21, 2020****Publication Classification**(51) **Int. Cl.**
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H04N 7/15 (2006.01)(52) **U.S. Cl.**CPC **G06T 15/20** (2013.01); **H04N 7/157** (2013.01); **G06F 3/165** (2013.01)(57) **ABSTRACT**

A 3D conversation system can facilitate 3D conversations in an augmented reality environment, allowing conversation participants to appear as if they are face-to-face. The 3D conversation system can accomplish this with a pipeline of data processing stages, which can include calibrate, capture, tag and filter, compress, decompress, reconstruct, render, and display stages. Generally, the pipeline can capture images of the sending user, create intermediate representations, transform the representations to convert from the orientation the images were taken from to a viewpoint of the receiving user, and output images of the sending user, from the viewpoint of the receiving user, in synchronization with audio captured from the sending user. Such a 3D conversation can take place between two or more sender/receiving systems and, in some implementations can be mediated by one or more server systems. In various configurations, stages of the pipeline can be customized based on a conversation context.

